

Appl. No. 10/643,401

Amendment dated December 21, 2004

Reply to Non-Final Office Action of September 2, 2004

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.-15. (Canceled)

16. (Previously presented) A thermal interface positionable at a juncture between an electronic component and a heat sink for facilitating heat transfer from said electronic component to said heat sink comprising:

a) a generally planar substrate consisting essentially of a single layer having first and second surfaces and defining a first continuous peripheral edge, said peripheral edge having a portion thereof extending beyond the juncture between said electronic component and said heat sink;

b) a first layer of a heat conductive composition formed substantially about said first surface of said substrate, and a second layer of a heat conductive composition formed substantially about said second surface of said substrate, said first and second layers further being formed upon said portion of said substrate extending beyond said juncture between said electronic component and said heat sink; and

c) a layer of adhesive formed upon a portion of a respective one of said layers of heat conductive material,

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said adhesive layer being localized upon said portion of said peripheral edge defined by said generally planar substrate extending beyond said juncture between said electronic component and said heat sink.

17. (Previously presented) The thermal interface of Claim 16 wherein said substrate comprises a thermally conductive metal foil.

18. (Previously presented) The thermal interface of Claim 17 wherein said foil is selected from the group consisting of copper, gold, silver and aluminum.

19. (Previously presented) The thermal interface of Claim 16 further comprising:

a peel-away protective layer formed to said adhesive, wherein peeling away said peel-away layer exposes said layer of adhesive on said substrate so as to facilitate adhesive bonding of said thermal interface to said heat sink.

20. (Previously presented) A thermal interface positionable at a juncture between an electronic component and a heat sink for facilitating heat transfer from said electronic component to said heat sink comprising:

a) a generally planar substrate consisting essentially of a single layer having first and second surfaces and defining a first continuous peripheral edge, said peripheral edge having a portion thereof extending

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beyond the juncture between said electronic component and said heat sink;

b) a first layer of a heat conductive composition formed substantially about said first surface of said substrate, and a second layer of a heat conductive composition formed substantially about said second surface of said substrate, said first and second layers further being formed upon said portion of said substrate extending beyond said juncture between said electronic component and said heat sink and formulated to have a melting point of approximately 51°C - 60°C, and

c) a layer of adhesive formed upon a portion of a respective one of said layers of heat conductive material, said adhesive layer being localized upon said portion of said peripheral edge defined by said generally planar substrate extending beyond said juncture between said electronic component and said heat sink.

21. (Previously presented) The thermal interface of Claim 20 wherein said substrate comprises a thermally conductive metal foil.

22. (Previously presented) The thermal interface of Claim 21 wherein said foil is selected from the group consisting of copper, gold, silver and aluminum.

23. (Previously presented) The thermal interface of Claim 20 further comprising:

a peel-away protective layer formed to said adhesive, wherein peeling away said peel-away layer exposes said

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layer of adhesive on said substrate so as to facilitate adhesive bonding of said thermal interface to said heat sink.

24. (Previously presented) A method for facilitating the transfer of heat from an electronic component to a heat sink across an interface therebetween, the method comprising the steps:

a) providing a thermal interface positionable between said electronic component and said heat sink, said thermal interface comprising:

(i) a generally planar substrate consisting essentially of a single layer having first and second surfaces and defining a first continuous peripheral edge, said peripheral edge having a portion thereof extending beyond the juncture between said electronic component and said heat sink;

(ii) a first layer of a heat conductive composition formed substantially about said first surface of said substrate, and a second layer of a heat conductive composition formed substantially about said second surface of said substrate, said first and second layers further being formed upon said portion of said substrate extending beyond said juncture between said electronic component and said heat sink; and

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(iii) a layer of adhesive formed upon a portion of a respective one of said layers of heat conductive material, said adhesive layer being localized upon said portion of said peripheral edge defined by said generally planar substrate extending beyond said juncture between said electronic component and said heat sink;

b) interposing the thermal interface provided in step (a) between said electronic component and said heat sink such that said layer of adhesive extends beyond said juncture between said electronic component and said heat sink; and

c) compressively engaging said electronic component to said heat sink with said thermal interface disposed therebetween.

25. (Previously presented) The method of Claim 24 wherein in step (a), said first and second layers of heat conductive composition have a melting point of approximately 51°C to 60°C.

26. (Previously presented) The method of Claim 24 wherein step (b) further comprises adhesively attaching said layer of adhesive to a portion of said heat sink extending beyond said juncture between said electronic component and said heat sink.

27. (Previously presented) The method of Claim 24 wherein in step (a), said generally planar substrate of

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said thermal interface comprises a thermally conductive metal foil.

28. (Previously presented) The method of Claim 27 wherein said foil is selected from the group consisting of copper, gold, silver and aluminum.